Oilseed, Biodiesel and Ethanol Subsidies & Renewable Energy Mandates: US Federal & Selected State Initiatives

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Objective Analysis

for Informed

Decision Making

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Introduction

This study describes the major incentives and policies implemented by the federal government, the state of Montana and other selected state governments with respect to ethanol and biodiesel production and consumption. The federal incentives discussed include the Volumetric Ethanol Excise Tax Credit, Biodiesel Blenders Tax Credit, Small Producer Tax Credit, Renewable Fuels Standard, Alternative Fuel Infrastructure Tax Credit, and the Clean Fuels Program. Some of these programs encourage the production of biodiesel or ethanol through tax credits or direct payments. Others encourage the consumption of biofuels by offering credits or direct payments for investments in infrastructure that allow biofuels to be utilized.

Policies and incentives offered by Montana are presented in this study. The major policies and incentives of other selected states are also presented. The states were selected because of their proximity to Montana or their national prominence in the renewable fuels market. They include Idaho, Wyoming, North Dakota, South Dakota, California, Iowa, Illinois and Minnesota.

Each state has developed its own incentive structure. Montana, for example, offers tax credits for investments in oilseed crushing facilities, biodiesel production equipment and biodiesel distribution infrastructure. The Montana legislature also has a policy statement that supports the need for renewable fuels, although the statement does not specify any particular actions. North Dakota has created more general incentives for agricultural processing facilities that may apply to businesses that produce biofuels. California has established mandates for the use of renewable fuels by investor-owned utility companies while offering few incentives for biofuel production. Wyoming offers only one incentive for biofuel production, which applies to ethanol. The major programs offered in each of the selected states are described in more detail later in this paper.

The information presented here provides a summary of each specific program, but does not provide comprehensive details about the management of each program. Consumers and businesses interested in these programs should seek additional information from each specific program agency about eligibility.

Types of Biodiesel, Ethanol and Natural Gas Fuels

E85:	"E" represents ethanol and "85" represents the percentage of ethanol in the fuel. For example E70 is a blend of 30% petroleum gasoline and 70% ethanol.
M85:	"M" represents methanol and "85" represents the percentage of methanol in the fuel. For example M50 is a blend of 50% petroleum gasoline and 50% methanol.
B20:	"B" represents biodiesel and "20" represents the percentage of biodiesel in the fuel. For example B20 is a blend of 80% petroleum diesel and 20% biodiesel.
Gasohol:	Fuel containing 90% petroleum gasoline and 10% ethanol.
E-Diesel:	Diesel fuel that is ethanol based.
MTBE:	Methyl Tertiary Butyl Ether is a fuel oxygenate, that can be added to gasoline to help reduce atmospheric pollution.
CNG:	Compressed Natural Gas
LNG:	Liquefied Natural Gas

Federal: Subsidies and Incentives

This section describes federal subsidies, incentives and other programs provided for ethanol and biodiesel related activities.

Biodiesel Blenders Tax Credit

This tax credit was established by the American Jobs Creation Act of 2004 and extended through 2008 by the Energy Policy Act of 2005. For biodiesel created from virgin oil, producers receive a tax credit of $1.00 per gallon of biodiesel produced. The virgin oil can be obtained from animal fats or oilseeds. Producers of biodiesel from recycled cooking oil are granted a tax credit of $0.50 per gallon.

These credits are available on a prorated basis if the product is sold as a blended product with petroleum based diesel fuel. For example, a B20 (20% biodiesel and 80% diesel) biodiesel blend would be eligible for a $0.20 credit if produced from virgin oil. (International 2005)

Volumetric Ethanol Excise Tax Credit

Originally, this tax credit reduced the federal excise tax by 5.2 cents for a gallon of fuel that contained 10 percent ethanol. Other blends also qualified for this credit, which translated to a 52 cent subsidy per gallon of ethanol. The American Jobs Creation Act of 2004 simplified and extended this tax credit through 2010. The credit now provides a 51 cent per gallon tax credit for ethanol. This tax credit is available for all blends of ethanol on a prorated basis. (Moller 2005)

Small Producer Tax Credit

This tax credit was introduced in the Energy Policy Act of 2005 and is available to producers of biodiesel or ethanol with annual production of less than 60 million gallons. The tax credit is $0.10 per gallon for the first 15 million gallons of production (a maximum tax credit of $1.5 million per year). The credit is due to expire on December 31, 2008. (International 2005; Moller 2005)

USDA Commodity Credit Corporation (CCC)

Beginning in 2000, the CCC program began to make payments directly to producers of biodiesel and ethanol. Payments were based on a percentage of the cost of the cost of feed stock used to produce the biodiesel or ethanol. The program calculated payments for increased production at 40% of feed stock costs and provided a reduced amount for production that did not represent an increase over the prior year's output. Producers with output in excess of 65 million gallons per year received a lower payment equal to 28.6% of the cost of the feed stock. (Gerpen 2004) The funding authorized for this program was $150 million per year. Payments based on the formulas above have resulted in potential payments in excess of the program's authorized funding level. Thus, payment rates have been reduced below 40% and 28.6% of the feed stock cost in some years. The payment rate is determined by dividing the authorized funding level by the funding level calculated by the funding formulas. This approach resulted in per gallon payments of $1.43 in 2004 and $0.50 in 2005. (International 2005) The decline in per gallon payments was due to increased production of eligible fuels. The program was due to expire at the end of 2006, but on June 8, 2006, the USDA announced that the program was being terminated on July 31, 2006, due to lack of funding. (Farrish 2006)

Energy Policy Act of 1992 (EPACT)

This act, originally passed in 1992 and amended in 1998, had an announced goal of replacing 30% of petroleum fuels with non-petroleum fuels by 2010. (Energy 2006) The main tool employed to achieve this goal was a mandate to state and federal agencies to purchase non-petroleum powered vehicles. The act required that 75% of new light-duty vehicles purchased by federal fleets be alternative fuel vehicles, although waivers could be granted under the following conditions: alternative fuels were not reasonably available, the cost of the alternative fuel was unreasonably expensive, or petroleum reductions equal to those gained by using alternative fuels could be obtained by other methods. Both biodiesel and ethanol powered vehicles could be purchased by state and federal agencies to meet this requirement. In January of 2004, the Department of Energy exempted private

and local government fleets from these regulations. (Gerpen 2004; International 2005)

Renewable Fuel Standard (RFS)

The RFS was established by Section 1501 of the Energy Policy Act of 2005. The RFS is designed to increase the amount of fuel from renewable sources that is blended with gasoline. The RFS began on January 1, 2006. Enforcement and creation of RFS program guidelines are the responsibility of the Environmental Protection Agency (EPA). The EPA indicated they could not meet the August 8, 2006 deadline for publishing comprehensive program guidelines. Thus, for the 2006 calendar year, default guidelines are in place.

These default guidelines require that 2.78 percent of the fuel sold to consumers be generated from renewable sources. Both biodiesel and ethanol qualify as renewable sources. The 2.78 percent requirement is consistent with the production of 4.0 billion gallons of ethanol. The minimum renewable fuels mandate increases to 4.7 billion gallons in 2007, 5.4 billion gallons in 2008, 6.1 billion gallons in 2009, 6.8 billion gallons in 2010, 7.4 billion gallons in 2011 and 7.5 billion gallons in 2012. (International 2005; Energy 2006)

Alternative Fuel Infrastructure Tax Credit

This tax credit was created by section 1342 of the Energy Policy Act of 2005. The tax credit is equal to 30% of the cost of alternative refueling property, up to a maximum of $30,000 for businesses and $1,000 for individuals. Biodiesel blends of B20 or more and ethanol blends of E85 or greater qualify as alternative fuels. The tax credit is effective for the period January 1, 2006 to December 31, 2009. (Energy 2006)

Clean Cities Program

The goal of the federal Clean Cities program is to promote environmental, economic and energy security by supporting local programs to reduce petroleum consumption. Grants and fact sheets are supported by this program. The program also maintains data bases and offers technical support. (Energy 2006)

The Greater Yellowstone-Teton Clean Energy Coalition is the only Clean Cities program to currently operate in Montana.

Petroleum Violation Escrow Account

Fines paid by oil companies from 1973 to 1981 for violations of federal oil price limits funded this account. These monies are used for energy efficiency and renewable energy projects. For the most part, these funds are directed to State Energy and Weatherization Assistance programs. Over $4 billion have been distributed since this account's inception. (Energy 2006)

In Montana, these funds are directed to the Department of Public Health and Human Services' Low Income Energy Assistance and Weatherization Program. (Bioenergy Program 2006)

Clean School Bus USA Program

This program offers cost sharing grants ($7.5 million in 2005) to school districts to upgrade their diesel fleets, including modifications that allow buses to run on biodiesel or for the purchase of new buses that run on biodiesel. The main focus of this program is to reduce emissions and improve fuel economy. (Energy 2006)

These funds are available to 54 smaller Montana school districts that own the buses operated within their districts.

Clean Fuels Grant Program (Dept. of Transportation)

This program is designed to promote the use of advanced bus technologies to reduce emissions. The construction of alternative fuel stations and modifications to promote the utilization of biodiesel are covered by this program. (Energy 2006)

Federal Bio-Based Products Preferred Procurement Program

This program was established by the Farm Security and Rural Investment Act of 2002. The provisions of this program require federal agencies to purchase bio-based products over petroleum based products. Exceptions from this requirement are granted if the alternative bio-based product is not reasonably

priced, available, or of equal performance. This program also directs the U.S. Department of Agriculture to develop and implement a bio-based product designation. (USDA 2006)

USDA Renewable Energy Systems and Energy Efficiency Improvements Program

The Farm Security and Rural Investment Act of 2002 established this program, which offers grants and loan guarantees to eligible projects located in rural areas. Projects that generate energy from renewable sources (including biodiesel and ethanol) are eligible for grants of up to $500,000 and loan guarantees of up to $10,000,000. Grant requests are limited to 25% of the total project costs and loan guarantees are limited to 50% of the total project costs. Applicants must demonstrate financial need to be eligible for a grant from the program. (USDA 2006)

Conservation Innovation Grant Program (CIG)

This program is administered by the Natural Resource Conservation Service. Total funding available for the national portion of program is $20 million for fiscal year 2006. Eligible applicants are awarded grants of up to $1 million for projects that implement conservation innovations. Bio-based energy projects that maintain or improve air quality are eligible under this program. (NRCS 2006)

The CIG program also allocates funds to be awarded at the state level. State level grants are limited to a maximum of $75,000. The state CIG programs may have different eligibility standards than the national portion of the program. In fiscal year 2006, Montana distributed $645,000 from the state level CIG program. (Suffridge 2006)

USDA Value-Added Producer Grant Program

This program offers grants to producers, agricultural cooperatives and majority-controlled producer-based businesses for either planning activities or working capital expenses. The program requires that grant funds be matched at a minimum of a one to one ratio. An eligible project must qualify as a value-added project. Production of farm based biofuels would likely qualify for the program. This program handed out $19.5 million in fiscal year 2006. (USDA 2006)

State Policies and Incentives

This section describes major programs and incentives for biodiesel and ethanol production and use operated by Montana, Montana's neighbor states and several states that are prominent in the renewable fuels market.

Montana

Montana offers the following direct incentives for oilseed crushing and biodiesel or ethanol production and consumption.

1. Oilseed Crushing Facility Tax Credit (Montana Code Annotated (MCA) 15-32-701)
   - The tax credit is equal to 15% of the cost of depreciable property to crush oilseeds, up to a maximum of $500,000.

2. Tax Exemption for Small Electrical Generation Equipment (MCA 15-6-225)
   - Equipment used to produce electricity from an alternative renewable energy source is exempt from taxation for five years. To qualify, the equipment must have an electrical generation capacity of less than one megawatt.

3. Biodiesel Production Facility Tax Credit (MCA 15-32-702)
   - This tax credit is equal to 15% of the cost of depreciable property used in the construction and equipping of a facility to be used to produce biodiesel.

4. Biodiesel Blending and Storage Tax Credit (MCA 15-32-703)
   - This tax credit is equal to 15% of the cost of storage and blending equipment, up to a maximum of $7,500 for a retail location and a maximum of $52,500 for a distributor.

5. Biodiesel Production Incentive (MCA 15-70-601)
   - This incentive provides $0.10 per gallon for each gallon of biodiesel produced that represents an increase over the previous year's production. This incentive is available for the first three

years of a production facility's operation. The program is due to expire on July 1, 2010.

6. Refund for taxes paid on biodiesel by a distributor or retailer (MCA 15-70-369)
   - This program provides a $0.02 per gallon refund for biodiesel sold by a distributor during the previous quarter, if the biodiesel was produced entirely from ingredients produced in Montana. The refund is paid to the distributor of the biodiesel.
   - This program also provides a $0.01 per gallon refund for biodiesel sold by a retailer during the previous quarter, if the biodiesel was produced entirely from ingredients produced in Montana. The refund is paid to the retailer of the biodiesel.

7. Gasohol Tax Rate Reduction (MCA 15-70-204)
   - This program reduces the state road tax that applies to gasohol by 15%. Gasohol is a blend of 90% petroleum gasoline and 10% ethanol. The current state gas tax is $0.278 per gallon.

8. Tax incentive for the production of alcohol (MCA 15-70-522)
   - This program provides a $0.20 tax incentive for each gallon of alcohol produced.
   - This program requires the alcohol be produced in Montana, with Montana agricultural products, if they are available.
   - A facility is eligible for a partial payment if only a portion of the alcohol is produced with Montana products. However, Montana products used to produce the alcohol must comprise at least 20% of the total production in year one. This 20% requirement is increased annually over the life of the facility to 25%, 35%, 45%, 55%, and then 65%.
   - No single producer may receive more than $2 million during any 12 month period and funding for the entire program is restricted to $6 million for any 12 month period.

9. New or Expanded Industry Tax Credit (MCA 15-31-125)
   - This program offers manufacturing corporations a license tax credit of 1% of total wages paid for the first 3 years of operation or new wages paid for 3 years after an expansion.
   - The definition of manufacturing includes the production of energy from alternative renewable energy sources.

10. Tax Credit for Installation of a Non-Fossil Fuel Based Residential Energy System or Energy Generation Unit (MCA 15-32-201)
    - This program provides a tax credit equal to 100% of the cost a non-fossil fuel based energy system or a non-fossil fuel based energy generation system. The tax credit is limited to a maximum of $500.

11. Canola Processing Facilities and Ethanol Production Facilities Tax Exemptions (MCA 15-6-220)[1]
    - Machinery and Equipment used in a canola seed processing facility or in the production of ethanol are exempted from property taxation for 10 years.
    - Eligible canola processors must employ a minimum of 15 full time employees. Processors must also extract, refine, or package the canola oil for edible oil or edible oil products to be eligible.

12. Denaturing Alcohol Gasoline Tax Refund (MCA 15-70-221)
    - This program refunds gasoline taxes paid on gasoline used in the process of denaturing alcohol based fuels.

13. Commercial or Net Metering System Investment Credit (15-32-402)
    - This program offers a 35% tax credit for investments of $5,000 or more in depreciable property used in commercial or net metering systems. The system

[1] Although the MCA language includes only canola processing facilities, this exemption is likely available to all oilseed processors. (Bioenergy Program 2006)

must generate energy from renewable sources to be eligible.[2]

14. Value-Added Loan Package (Investments 2006)
    - Montana Board of Investments, in cooperation with approved lenders, offers loans with reduced interest rates to certain value-added businesses.
    - Eligible businesses must create or retain at least 10 jobs and the minimum loan amount is $250,000.
    - Oilseed processors and bio-fuels producers may qualify as value-added businesses.

15. Alternative Fuel Conversion Tax Credit (MCA 15-30-164)
    - This tax credit is equal to 50% of the cost (up to $500) of converting a vehicle to run on fuel blended with a minimum of 85% methanol or ethanol.

16. Alternative Energy Revolving Loan Account (MCA 75-25-101)
    - The Department of Environmental Quality administers a loan account that offers loans of up to $40,000 for building alternative energy systems.

Other Montana Policies[3]:

Montana also has an alternative fuels policy statement (MCA 90-4-1011), which encourages the Montana legislature and other policy makers to support the development of alternative fuels. It also indicates that these policies should benefit citizens or the environment of Montana. However, no direct action is prescribed in the statement.

Senate Joint Resolution No. 22 (2003) was passed to show support for drilling in the Alaska National Wildlife Range and alternative energy sources. This resolution appears to be based on concerns about America's energy dependence on foreign sources. No specific action is prescribed in this resolution.

Ethanol will be required to be blended at a 10% rate with all gasoline sold in the state once Montana ethanol production has reached 40 million gallons per year. (MCA 82-15-121)

Vehicles owned by the state of Montana (and related agencies) are directed to take all reasonable steps to use ethanol blended fuels (E10) in vehicles capable of utilizing ethanol blended fuels. These fuels must be commercially available and priced competitively with traditional fuels for this policy to be applied. (MCA 2-17-414)

Montana has passed Senate Bill 131 which bans the use MTBE as an additive for gasoline. The ban becomes effective one year after administrative rules are completed. These rules were not complete as of October 5, 2006. Ethanol can be used as a fuel additive to replace MTBE. (Bioenergy Program 2006)

Idaho

Idaho provides an incentive for gasohol consumption by subjecting gasohol to a $0.225 per gallon state fuel tax, while traditional fuels are taxed $0.25 per gallon. (2006)

A tax deduction is available to distributors for the number of gallons of biodiesel sold that contains agricultural products (oilseeds or animal fats). This deduction may not apply to more than 10% of the volume of special fuel reported. The effect of this deduction is an effective tax rate of $0.225 per gallon as opposed to $0.25 per gallon for petroleum gasoline and diesel. (Idaho Statue 63-2407)

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[2] Although the definition of alternative renewable energy sources as defined by MCA 15-6-225 does not specifically mention biomass, this credit is likely to be available to biofuel energy producers. (Bioenergy Program 2006)

[3] Several other programs are offered by either state or federal agencies that may provide benefits for oilseed, biodiesel or ethanol development under the certain circumstances. This guide will not summarize these policies because, typically, they are not focused on the main issues presented in this guide and eligibility for under these policies may require that the applicant have special characteristics. These programs include but are not limited to: the loan program described in MCA 80-12-201, the Department of Natural Resources and Conservation's "Renewable Resource Grant and Loan Program", the Department of Agriculture's "Growth Through Agriculture Program", Montana Capital Companies tax credit (MCA 90-8-202), USDA Rural Development's "Business and Industry Guaranteed Loan Program."

Wyoming

Wyoming offers no incentives for biodiesel. (International 2005) A $0.40 per gallon credit is available for ethanol producers if 25% of their feedstock purchases are produced in Wyoming. No individual ethanol producer may claim more than $2 million per year and the total program may not exceed $4 million per year.

North Dakota

North Dakota offers a variety of tax incentives available to agricultural processing facilities that both biodiesel and ethanol producers may qualify to receive.

Agricultural processors may receive a partial or full exemption from property taxes for up to a maximum of five years. A requirement for this program is that the project be a "new or expanded revenue producing enterprise". (Fong 2005)

A sales tax exemption is available for new or expanded plant equipment used for manufacturing or agricultural processing. Another sales tax exemption is available for materials used to construct an agricultural processing facility. Equipment that enables a facility to sell at least two percent biodiesel is also exempt from North Dakota sales tax. (Senate Bill 2217 in 2005)

Corporations engaged in the processing of agricultural products are eligible to receive an income tax credit equal to one percent of the wages paid during their first three years of operation and one half of a percent for years four and five. This credit is not available if the corporation qualified for the property tax exemption discussed above.

An agricultural commodity processing facility investment tax credit is available. This tax credit is equal to 30% of the investment, with a maximum tax credit of $50,000 per year and a cumulative maximum tax credit of $250,000. The credit may never exceed 50% of a company's total tax liability.

A biodiesel tax credit is also available. The tax credit is equal to 10% per year for up to five years for costs incurred to develop or modify a facility to produce or blend biodiesel (B2 minimum). The tax credit is capped at $50,000 per year and a cumulative maximum of $250,000. (Fong 2005)

A biodiesel income tax credit is available to suppliers that blend biodiesel into petroleum fuel (B5 or greater). This credit is equal to $0.05 per gallon. (Senate Bill 2217 in 2005)

A biodiesel loan program, funded at $1.2 million for the biennium ending June 30, 2007, in partnership with the Bank of North Dakota, buys down interest rates on loans to biodiesel production facilities. (Senate Bill 2217 in 2005)

North Dakota also has two ethanol production incentive programs. Under section 4-14.1-07 plants that produce fewer than 15 million gallons are eligible for a maximum of $900,000 and plants that produce greater than 15 million gallons are eligible for a maximum of $450,000. This incentive is equal to $0.40 per gallon produced.

The section 4-14.1-08 program is designed for ethanol producers. Statewide funding for this program is $1.6 million per year and no single facility may receive payments that exceed a cumulative total of $10 million. The incentive is calculated in two steps. First, if the average quarterly price of corn exceeds $1.80 per bushel, then the incentive equals the number of gallons produced multiplied by $0.001 but if the average quarterly price of corn does not exceed $1.80 per bushel then the number of gallons produced is multiplied by $-0.001. Secondly, if the average quarterly price of ethanol exceeds $1.30 per gallon then the incentive is reduced by the number of gallons produced multiplied by $-0.002 but if the price of ethanol does not exceed $1.30 per gallon then the incentive is increased by number of gallons produced multiplied by $0.002. The subsidy payment is the sum of the payment calculated based on the price of corn and the payment calculated based on the price of ethanol. (Legislature)

The state excise tax on diesel fuel is reduced to $0.2185 from the standard rate of $0.23 if the fuel is at least 2% biodiesel. This incentive becomes effective when a biodiesel refining facility located in North Dakota is certified as having an annual capacity of at least 10 million gallons. (Fong 2005)

South Dakota

South Dakota taxes E85 and M85 (or greater) fuels at a rate of $0.10 per gallon. Other ethanol blends are taxed at a rate of $0.20 per gallon. (South Dakota Statutes 10-47B-4; 10-47B-136) Biodiesel and biodiesel blends are taxed at a rate of $0.22 per gallon. (SD Statutes: 10-47B-3 to 10-47B-10) General gasoline taxes are $0.22 per gallon. All fuels are subject to an additional $0.02 per gallon tank inspection fee.

Under the program established by South Dakota Statue 10-45B, tax refunds are available to contractors for the excise, sales and use taxes paid during the construction or expansion of an agricultural processing facility. This incentive includes biodiesel plants. The total cost of the facility or expansion must be at least $4.5 million dollars to qualify for this incentive.

South Dakota offers a $0.20 per gallon production incentive to ethanol producers. The ethanol must be blended with gasoline to be eligible for this incentive. Total annual funding for this program is $7 million. (SD Statute 10-47B-162)

South Dakota has also directed state employees to use at least a B2 blends whenever a blend of B2 or greater is "available and financially prudent". (Executive Order 2006-01)

California

California provides no direct payments for ethanol or biodiesel production. Only two programs (California Alternative Energy and Advanced Transportation Financing Authority and Pollution Control Tax-Exempt Bond Financing Program) provide direct support to producers of biodiesel or ethanol. Both programs provide favorable financing terms to certain California businesses. These programs are not specifically designed to assist biodiesel or ethanol producers, and many producers may not qualify.

Several programs that do affect ethanol consumption are in effect in California. Alcohol fuels are taxed at one-half the rate of the California excise tax that applied to petroleum gasoline. This reduced rate applies to the portion of the blended fuel that is derived from alcohol (For example: the gasoline tax on a gallon of retail fuel that is 10% ethanol would be calculated as 0.9 * California Excise Tax + 0.1 * 0.5 * California Excise Tax). The current California gasoline excise tax is $0.18 per gallon.

In most parts of the country, the recent ban on MTBE as an oxygenation agent has increased the demand for ethanol, which also increases the oxygen level of the fuel. This is not the situation in California. California requires a specific formula of gasoline (California Reformulated Gasoline) be sold in the state. Tests have shown that California Reformulated Gasoline burns cleaner without oxygenation agents, like ethanol. A lawsuit based on these facts led to the removal of fuel oxygenation requirements in California. (Energy Policy Act of 2005; (Moller 2005)

The "Alternative Fuel and Alternative Fuel Vehicle Fund" is designed to evaluate programs that reduce air pollution (from vehicles) with respect to the California Clean Air Act. This fund created a "clean transportation funding" program to assist in creating, upgrading or expanding refueling infrastructure for alternative fuels. (California Health and Safety Code Section 44220 to 44247)

California's Lower-Emission School Bus Grant program provides $12.5 million annually for the replacement of older buses with newer buses and additional $12.5 million is provided to retrofit current buses with emission control devices. Retrofitting a bus to run on biodiesel appears to qualify for the program, but this is not the main focus of the program.

The "West Coast Global Warming Mitigation Initiative" is an agreement among the governors of Washington, Oregon and California. The initiative involves adopting standards to lower greenhouse gas emissions (from vehicles) through promoting markets for renewable energy (among other things). The California State Energy Resources Conservation and Development Commission is tasked with developing a plan to increase the use of alternative transportation fuels by June 30, 2007. Both ethanol and biodiesel qualify as alternative fuels.

California Renewable Portfolio Standard Program:

This program was established in 2002. It requires California's investor-owned utilities to "increase their use of eligible renewable resources" by 1 percent per year. The final target is 20% of total production from renewable resources by 2017. The program has been plagued with complex rules, inconsistency and lack of transparency. The main foci of the renewable energy focus have been wind, biomass and solar power. The only mention of oilseed based technologies in the 2005 Integrated Energy Policy Report (Electricity Generation Section) is that agricultural waste products can be used to create biomass energy. (Desmond 2005)

Diversifying California's Fuel Supply:

The discussion of diversifying vehicle fuel supplies covers technologies such as; natural gas (CNG and LNG), electric, hydrogen, biodiesel, ethanol and e-diesel. California is concerned about the environmental impacts of alternative fuels. A high priority is given to fuels that can be used with existing cars (for example, ethanol and biodiesel blends) for near term projects. No specific goals have been established for non-petroleum fuels, but recommendations for future legislation are put forth in the report. (Desmond 2005)

Iowa

Iowa's Ethanol Infrastructure Cost-Share Program provides up to $325,000 (statewide program funding) per year to eligible facilities that convert or build infrastructure to distribute E85 fuel. (Iowa Code 11-103.16(8A))

Retail service stations can claim an ethanol tax credit of $0.025 per gallon for every gallon of ethanol blended fuel that they sell in excess of 60% of their total fuel volume. This program is due to end on December 31, 2008.

House Bill 2754 (April 2006) created the Ethanol Promotion tax credit which becomes effective in 2009. This tax credit is linked to a retailer's attainment of the renewable fuels standard and will range from $0.025 to $0.065 per gallon. This bill also creates a retail tax credit for E85 fuel of $0.25 per gallon, which will be reduced each year until it is phased out in 2020. A retail tax credit of $0.03 per gallon for biodiesel is also included in this bill. Eligible retailers must sell blends of B50 or greater to qualify. (2006)

Iowa also has established several "alternative fuel loan programs" that offer low or discounted interest rates. One of these programs offers zero interest loans, up to $250,000, for alternative fuel production facilities located in Iowa (Iowa Code 476-46). Another program offers eligible value-added agricultural processors a mixture of forgivable and low interest loans. Typically, about 20% of these loans are forgivable. (Energy 2006)

Alternative Fuel Vehicles grants are available (Iowa Code 214A.19) for those who have purchased alternative fuel vehicles for the purpose of performing research or providing demonstrations with the alternative fuel vehicle.

E85 fuels are taxed at a rate of $0.17 per gallon, from January 1, 2006 until June 30, 2007. (Iowa code 452A.3, 452A.21, 11-103.16(8A)) Petroleum gasoline is taxed at a rate of $0.22 per gallon. A minimum of 10% of new, light-duty vehicles purchased by many state agencies are required to have the capability to run on alternative fuels. (Iowa Code 216B.3)

Iowa Renewable Fuels Standard (RFS) is designed to replace 25% of the gasoline used with biofuels by 2020. Biofuels include both ethanol and biodiesel. The goals set forth in the RFS include 10% use in 2010, 11% in 2011 and finally increasing to 23% in 2018.

By 2010, state agencies will be required to purchase Hybrid Electric Vehicles (HEV) or Alternative Fuel Vehicles (AFV) when an equivalent model is available. Law enforcement agencies are exempt from this requirement. State agencies are also required to operate flex fuel vehicles on E85 whenever E85 is available (Executive Order 41, 2005). All bulk diesel fuel purchases by state agencies must have renewable content of 5% by 2007, 10% by 2008 and 20% by 2010.

Illinois

The E85 refueling infrastructure grant program provides $500,000 per year in grants that will cover up to 50% of the cost with a maximum grant of

$2,000 to convert an existing facility to an E85 facility or 50% of the cost with a maximum grant of $40,000 to construct a new E85 facility.

Illinois also has a clean school bus program which provides funds to help schools reduce diesel emissions. This program includes converting buses to run on biodiesel.

The Illinois alternative fuel vehicle and alternative fuel rebate program offers rebates of up to 80% or a maximum of $4,000 of the incremental purchase cost of alternative fuel vehicles. Both biodiesel and ethanol vehicles qualify. This program also offers rebates for the additional cost of using E85 or B20 fuels in these vehicles (House Bill 931 in 2005 and 415 Illinois Complied Statues 120/30).

The Illinois green fleets and the Illinois green fuels programs are designed to promote alternative fuels. These programs appear to support alternative fuels with marketing campaigns.

The alternative energy research, development and demonstration program manages projects that promote the use of ethanol and support research that may reduce the cost of producing ethanol.

Most state agencies and some local agencies are required to use at least a B2 biodiesel blend starting July 1, 2006. This mandate applies when refueling at a bulk central fueling facility (House Bill 112 in 2005 and 625 Illinois Compiled Statues 5/12-705.1). The Department of Central Management has also been directed to help develop the infrastructure for E85 and biodiesel refueling.

No sales or use taxes are applied to biodiesel blends of 10% or more and blends of 1% to 10% biodiesel are subject to only 80% of the sales and use taxes.

Fuel containing between 70% to 90% ethanol are not subject to sales or use taxes from July 1, 2003 until December 31, 2013.

The state vehicle procurement procedures offer a preference to bidders that are able to fulfill a contract with vehicles that can be powered by Illinois soybean or corn products. The state also operates a corn-to-ethanol research pilot plant. The goals of this plant include developing value added by-products and to develop new production technologies.

Minnesota

The State of Minnesota mandated 2% biodiesel use on June 30, 2005, but the mandate had to be suspended within weeks due to fuel quality problems.(International 2005) The mandate has since been reinstated. (Groschen 2005)

Minnesota also offers an ethanol production incentive program that provides a $0.20 per gallon incentive to ethanol producers. A single producer may not receive more than $3 million under this program. Production must have been established by June 30, 2000 to be eligible. This program is due to expire on June 30, 2010.

The twin cities area is a national pilot market for E85 fuels and flexible fuel vehicles. This program is supported by a variety of national and state agencies as well as corporate sponsors.

The state of Minnesota has set a goal of a 25% reduction in petroleum gasoline used by state agencies by 2010. This goal increases to 50% by 2015. The goals for petroleum diesel are a 10% reduction by 2010 and a 25% reduction by 2015. To achieve these goals, 75% of new vehicles purchased by state agencies must be clean fuel vehicles and 75% of these vehicles must have a minimum rating of 30 miles per gallon for city use and 35 miles per gallon for highway use.

A biodiesel task force has been created to help the state achieve their production goals and help the marketplace transition to biofuels.

Two programs require clean fuels to be used in state vehicles for the purpose of emissions reductions. Biodiesel blends of at least 20% and ethanol blends of at least 70% qualify as a “clean fuels” under these programs.

Minnesota also offers reduced tax rates on alternative fuels. Gas is taxed at $0.20 per gallon, E85 at $0.142 and M85 at $0.114. All fuels are subject to a $0.02 per gallon tank clean up fee.

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